

## Section 4 Asset Class - Channelization:

The Channelization asset class consists of pavement markings that define usage of the city streets and direct the flow of traffic. Channelization is not long-lived and is generally not considered in the same category of infrastructure such as bridges, pavement or signals, for example. It does require maintenance that is generally replacement of existing markings on a regular basis, usually annually. For this reason, it is included in the asset management purview in the department.

### Pavement Markings:



Pavement markings are markings on the roadway that communicate essential information to road users about the use of the roadway and how to negotiate city streets safely and efficiently.



**Bike Sharrows**

There are several categories of pavement markings:

- ✓ Pavement delineators (lane lines)
- ✓ Legends, such as bike sharrows
- ✓ Hatchings
- ✓ Stop lines
- ✓ Parking space delineators
- ✓ Curb markings

Pavement markings are maintained by Traffic Maintenance crews at the direction of the Traffic Operations group in the Traffic Management Division.

### *Current Inventory and Anticipated Annual Growth:*

Pavement delineators on arterials in the city of Seattle are estimated at approximately 1,726 lane line miles.

A manual file of pavement markings has been maintained in the Traffic Operations engineering files for many years. A field check of pavement markings has not been undertaken to verify the accuracy of the inventory that exists in the manual file. During 2008 and 2009, supported by BTG funding, the engineering drawings for approximately 1600 intersections were digitized and converted to a GIS channelization layer on the Street Network Database. These files will serve as the basis for a new inventory of pavement markings on arterial streets. The pavement marking inventory will change over time as adjustments are made to lane usage.

The replacement value of pavement markings is in excess of \$4.3million in current dollars.

### *Condition Ratings, Useful life and Life Cycle Costs, and Maintenance Approach:*

This table displays the various markings SDOT maintains.

Type of Pavement Marking	Useful Life (Years)	Maintenance Approach	Condition Rating	Cost to Install (current Dollars)
Pavement Delineators, Arterial	1	Re-stripe annually	Good	\$175 per mile of 4" line
Bicycle Lane Line	3	Customer request	TBD	\$175 per mile of 4" line
Legends, Bike Sharrows	10	Customer request	Good	\$150-250 per

Type of Pavement Marking	Useful Life (Years)	Maintenance Approach	Condition Rating	Cost to Install (current Dollars)
				legend
Legends, Channelization	10	Customer request	TBD	\$150-\$200 per legend
Stop Bars	10	Customer request	TBD	\$250
Pavement Markings, Other (includes non-arterial lane lines)	5	Customer request	TBD	\$175 per mile of 4" line

For arterials, the high volume of traffic results in a useful life of only one (1) year for lane line markings. Funding under the BTG program has allowed for restriping the arterial pavement delineators every year, so the condition of pavement delineators on the arterials is considered in good condition. Other pavement markings are not assessed on a regular basis, so the condition of many of these markings has not been determined.

#### ***Current Performance Measures:***

The Traffic operations division has established the following performance measures for pavement markings

Performance Measure	2009 Actual	2010 Goal
Arterials re-striped (including edgelines)	1323	1148
Bike lanes and sharrows striped	35 miles	20 miles
Bike lanes and sharrows remarked	35 miles	35 miles



**Transit Lane Legend**

The TSP has established an additional performance measure for pavement markings:

- ✓ Achieve 100% industry standard condition for all roadway markings (non-specific time period).

When the re-striping is performed, it is done in accordance with industry standards.

#### ***Funding Requirements and Unmet Funding Needs:***

Channelization is not long-lived and is generally not considered in the same category of infrastructure such as bridges, pavement or signals, for example. It does require maintenance that is generally replacement of existing markings on a regular basis, usually annually. In some situations channelization is re-engineered, for instance an intersection or an arterial corridor is studied and the layout is totally revised. The annual re-striping is funded from the maintenance budget, and a new layout will most often be done in connection with a CIP program. In 2010, Traffic Operations has budgeted \$1,038,000 for curb and pavement markings. Funding is not adequate to meet all the targets for arterials and bike lanes and sharrows and to address the current level of customer request.